REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

In response to the rejection of claims 23-27, 29-33 and 35-46 under 35 U.S.C. §101 as allegedly not being directed to statutory subject matter, the independent ones of these claims have been amended above so as to more explicitly recite the use of at least one programmed computer having a CPU, memory and input/output ports. However, it is respectfully submitted that even without this amendment, the clear literal language of these method claims requires the use of at least one "machine". Furthermore, as those skilled in the art will readily appreciate, digital signal processing of the general kind here contemplated necessarily requires transforming underlying subject matter (e.g., magnetizable materials, current flows, electrical bi-stable circuits, and the like) to a different state. Indeed, computers were initially called "state machines" precisely because they contain numerous physical elements that change in physical state at each clock cycle of the computer.

If there is any remaining doubt that these claims are directed to statutory subject matter, it is respectfully requested that the undersigned be telephoned for discussion so that such can be promptly resolved.

The rejection of claims 1-5, 7-11, 13-27, 29-33 and 35-46 under 35 U.S.C. §103 as allegedly being made "obvious" based on Coffman '174 in view of Gergic '316 is respectfully traversed.

The Examiner alleges that Coffman, in combination with Gergic, teaches determining *"input/outputs' user preference...so that multiple user interfaces, e.g., GUI, speech, etc., are synchronized and continuously updated as a user interactively proceeds with one or the other modality"*. However, this is not what applicants are claiming. The presently claimed subject matter does not recite *"synchronizing multiple user interfaces"*. Moreover, the combination of Coffman with Gergic does not teach *"determining user's preferences for input/output types"*.

Coffman describes at ¶ [0005] (emphasis added):

> *"The ability to access information via a multiplicity of appliances, each designed to suit the individual's specific needs and abilities at any given time, necessarily means that these interactions should exploit all available input and output (I/O) modalities to maximize the bandwidth of man-machine communication."*

Coffman is concerned with providing sufficient information bandwidth to and between a user and a conversational computing system. The skilled reader would learn from Coffman that, where a plurality of output modes is available, then the system should seek to use all of them, so as to enhance information bandwidth to the user. Similarly, where a plurality of input modes is available, then the system should seek to use all of them, so as to enhance information bandwidth received from the user. Hence, Coffman teaches away from the presently claimed invention, which provides an interactive dialogue apparatus for selecting the most appropriate mode for input from or (as

the case may be) output to the user, depending on an assessment of the user's preferences. There is no reason to select modes in Coffman as every available mode is used.

The Examiner alleges that Coffman at ¶ [0153] teaches *"control means for determining a suitable type of output prompt to be output from at least one of said output ports in response to a received input response"*. However, this phrase omits an important feature of applicants' claim 1, which requires (emphasis added): *"control means for determining, on the basis of a user preference value, a suitable type of output prompt to be output from at least one of said output ports in response to a received input response"*. This feature of applicants' claim 1 is not found in Coffman. Moreover, ¶ [0153] merely describes choosing an appropriate engine for an output mode (e.g., TTS – text to speech – for voice output) – and does not describe choosing the output mode itself. As previously indicated, Coffman teaches use of all available output modes, so as to maximize bandwidth to the user.

The Examiner seeks to combine fragments taken from separate sections (i.e., ¶ [0053] dealing with the DMA and ¶ [0060] that deals with the DMAF). The combination by the Examiner of incomplete parts of sentences from two separate paragraphs results in a text that has been generated by the Examiner and is not actually present in the cited document. This artificial combination is respectfully traversed as not accurately reflecting the teaching of this prior art document.

For completeness, the fragments cited nevertheless have been considered. They do not, in any case, describe the alleged features. The Examiner claims to have found, in a first fragment combination, a description of the store of applicants' claim 1 for *"storing input and output type data indicative of one or more properties of the input and output ports and/or the input responses and output prompts communicated there-through"*. However, no correspondence to this element of applicants' claim 1 is found in Coffman, as explained below.

No store is described in either of ¶ [0053] or ¶ [0060] of Coffman. ¶ [0053] describes the DMA of Coffman passing, to engines generating the response, the output of the application method chosen to handle the user input. ¶ [0060] describes not the DMA, but the DMAF of Coffman passing to the DMA application properties (e.g., resources needed by the engines). There is no reference to storage and neither the method output of ¶ [0053], nor the engine resources of ¶ [0060], reads onto the input and output type data of applicants' claim 1. Moreover, the Examiner does not indicate what aspect of Coffman is alleged to correspond to the "input and output type data" of claim 1. Hence, the Examiner's allegation to have found a teaching in Coffman of the input and output type data store of applicants' claim 1 is respectfully traversed.

The Examiner claims to have found, in a second inappropriate fragment combination, a description corresponding to *"said input and output type data is updated when: i) any of said one or more properties change; and/or ii) output prompts are sent;*

and/or iii) input responses are received". Notwithstanding the lack of any description of storage of input and output type data, neither ¶ [0053] nor ¶ [0060] of Coffman describes updating of input and output type data. Indeed, the second fragment combination refers variously to managing and processing method outputs (which are distinct from the output responses of Coffman), input handling, processing and generation of responses and the composition of an algorithm string. The Examiner is asked to indicate more exactly what part of this second fragment combination is asserted to correspond to "updating input and output type data".

The Examiner's interpretation of Coffman's ¶ [0053] and ¶ [0060] is, therefore, wholly in error.

In sum, the Examiner fails to indicate any aspects of Coffman that correspond to the following features of applicants' claim 1:

storing input and output type data,

updating input and output type data,

determining user's preferences for input/output types,

determining a suitable type of output prompt on the basis of a user preference value;

establishing a user preference value.

Moreover, as demonstrated above, Coffman actually teaches away from the present invention in describing a system in which there is no reason to determine a suitable type of output prompt.

In addition, none of the above features of claim 1 is found in Gergic.

The Examiner misinterprets the quoted text of Gergic at ¶ [0023]:

> *"...any input is modeled independently of the modality as an input/output event that is then processed by a dialog manager and arbitrator that will use history, dialog context and other meta-information (e.g., user preference, information about the device and application) to determine the target of the input event and/or engage a dialog with the user to complete, confirm, correct or disambiguate [t]he intention of the user prior to executing the requested action."*

As indicated in this section of Gergic, as quoted by the Examiner, Gergic teaches modeling of any input independently of the modality. It is noted that the user preference referred to in Gergic is used to determine the target of an input (i.e., the internal process that is to process that input), not for determining a suitable type of output prompt.

Gergic describes modeling inputs without regard to modality (i.e., "*independently of the modality*"). Hence, Gergic does not describe (and there is no need in Gergic for) the input and output type data indicative of one or more properties of the input and output ports and/or the input responses and output prompts communicated therethrough, of applicants' claim 1. Gergic does not teach establishing a user preference

value from properties of input and output ports and/or input responses and output prompts communicated therethrough.

Reference in Gergic to the "intention" of the user is used to indicate the "meaning" that the user is trying to convey by means of various gestures. Reference in Gergic to "intention" is not to be confused with applicants' presently claimed user's preferences regarding type of input or output, which is not touched upon in Gergic.

At ¶ [0017], Gergic defines the terms "dialogue" and "conversation" as referring to a user's interaction with the device independent of the modality. At ¶ [0018], Gergic characterizes "conversational gestures" as any dialogue independent of the modalities, the devices or the browsers employed to access information. At ¶ [0019], Gergic indicates that "an application may be written in a manner which is independent of the content/application logic and presentation".

Gergic is directed to "a new application programming language", which Gergic refers to as conversational mark-up language or CML. At ¶ [0025], Gergic confirms that CML is modality-independent. Hence, it is clear that CML is not determined and is insensitive to the modality of any particular input or output gesture.

There is no teaching in Gergic of a means for determining on the basis of user preference a suitable type of output prompt to be output at an output port in response to a received input response. There is no teaching in Gergic of a first store storing input

and output type data indicative of one or more properties of the input and output ports and/or of the input responses and output prompts communicated therethrough.

At ¶ [0021], Gergic discusses "transcoding" by which it is understood that by establishing a particular input or output gesture, an equivalent gesture is established in one or more other modalities. The transcoding allows a gesture to be output using a plurality of different modalities. Here again, Gergic fails to address the problem solved by the presently claimed invention of determining a suitable type of output prompt.

As set out above, clear and significant differences exist between the dialog management arrangement of Gergic and the interactive dialogue apparatus of applicants' claim 1. Gergic also does not describe any of these features of applicants' claim 1 that are absent from Coffman. Hence, the teaching of Gergic would not prompt or assist the person skilled in the art to adapt Coffman so as to arrive at the presently claimed invention.

Independent claims 2, 23 and 24 include features corresponding to the features of claim 1 identified above, which are absent from both Coffman and Gergic.

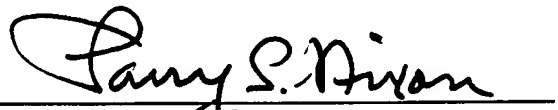
Advantageously, by assessing user preference, the presently claimed invention supports a more natural interchange with the user that is not provided by the systems of Coffman or Gergic, for example, allowing outputs to be tailored to support the user's preferred input mode.

Given such fundamental deficiencies of both cited references (whether taken singly or in combination) with respect to the above-discussed aspects of the independent claims, it is not necessary at this time to detail additional deficiencies of this allegedly "obvious" combination of references with respect to other aspects of the rejected claims. Suffice it to note that, as a matter of law, it is impossible to support even a *prima facie* case of "obviousness" unless the cited art teaches or suggests each and every feature of each rejected claim.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

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